



Brief Interventions in Emergency Department and Health Care Settings

Traumatic injury inflicts enormous medical and psychosocial harm on its victims. The greatest underlying cause of injury is the misuse of alcohol and drugs. By intervening in the substance abuse of individuals who frequent emergency departments, alcohol/drug abuse can be reduced, as can injuries requiring emergency department admissions.

Substantial numbers of individuals who visit hospital emergency departments (EDs) present with a diagnosis or injury caused by substance use or abuse disorders. A 2004 study found that nationally between 1992 and 2000, there was an average of 7.6 million ED visits per year for alcohol alone, or 7.9% of all such visits. This is approximately three times higher than previously estimated, based on physician documentation or patient disclosure of alcohol involvement.² It has been estimated that 20-50% of adult primary care patients may abuse alcohol or drugs and go undetected by their provider.

A wide range of effective treatments has been developed for mild, moderate, and severe drug and alcohol problems. Prior studies have shown that interventions, when delivered to injured patients in hospital EDs and on the inpatient units of hospitals, can reduce alcohol and drug consumption, prevent re-injury, and help patients with more severe problems access intensive, community-based chemical dependency treatment. These services demonstrate that counseling and referral helps reduce adverse health outcomes, reduces cost for medical care, reduces future emergency room use, reduces criminal justice involvement, and improves employment outcomes.

A study conducted at the trauma center at Harborview Hospital in Seattle found that of 2,524 patients screened, 1,153 or 46% tested positive for alcohol abuse. Patients were then randomized either to a control group, or to receive a brief onsite intervention related to the patients' drinking,

including information about the risks of alcohol abuse and the availability of treatment resources. At the 12-month followup, the intervention group had decreased alcohol consumption by an average of 21.8 drinks per week. At the three-year followup, there had been a 47% reduction in injuries requiring either emergency department or trauma center admission, and a 48% reduction in injuries requiring hospital admission.³

Besides reducing injuries and future ED admissions, early identification of alcohol and drug problems and brief intervention is, in some instances, an effective and cost-saving alternative to more intensive chemical dependency treatment. Early identification of alcohol and drug problems holds out the hope of preventing the progression of chronic substance abuse and dependence.

Washington State Screening, Brief Intervention, and Referral to Treatment (WASBIRT)

In 2003, the Department of Social and Health Services, Division of Alcohol and Substance Abuse (DASA) received a \$16.1 million 5-year grant from the federal Substance Abuse and Mental Health Services (SAMHSA), Center For Substance Abuse Treatment (CSAT) to implement the Washington State Screening, Brief Intervention, and Referral to Treatment (WASBIRT) program.

The goals of WASBIRT are to:

- Provide substance abuse screening in six EDs, thereby identifying a large number of patients who have substance abuse problems of all severity levels;
- Deliver brief interventions in EDs to patients admitted to the hospital who are not dependent, but whose misuse places them at increased risk for future re-injury or hospitalization;



- Provide brief treatment (5-12 sessions) on an outpatient basis to some patients who need and want more intensive, brief preventive treatment;
- Increase the number of referrals made to communitybased chemical dependency treatment for patients dependent on alcohol and other drugs;
- Reduce subsequent ED utilization, medical costs, criminal behavior, disability, and death by patients with drug and alcohol problems of all severity level; and,
- Involve a multitude of perspectives to explore systems change to improve existing linkages to these services, and to expand substance abuse services to include early intervention.

As a result of the grant, chemical dependency professionals (CDPs) are now working in hospital emergency rooms in Seattle, Tacoma, Everett, Yakima, Toppenish, and Vancouver to screen and refer patients. WASBIRT is expected to provide services to 122,905 people during the period of the grant at Harborview Medical Center, Tacoma General Hospital, Providence Everett Medical Center, Yakima Regional Medical and Heart Center, Toppenish Community Hospital, and Southwest Washington Medical Center.

Through March 2005 (12 months after the first patient screening), 10,522 had received services through WASBIRT. Of these, 4943, representing 47%, were screened, but no further action was needed; 4,911 (47%) received a brief intervention in the hospital; 422 (4%) received a brief intervention plus several brief therapy sessions; and 246 (2%) either received chemical dependency treatment, or were referred for further assessment and treatment.

"Teachable Moments"

In some ways, EDs and trauma centers are ideal sites in which to provide people who drink or use illicit drugs in harmful or hazardous patterns with a targeted intervention at the time of an adverse event—a situation sometimes referred to as a "teachable moment." The WASBIRT program extends beyond the brief intervention model by providing timely and appropriate referral to more intensive substance abuse treatment where appropriate.

Prior research has shown this to be an effective approach. A 2001 study showed that of 719 patients provided a direct referral to substance abuse treatment over a one-year period, some 80% made contact with the treatment facility, and 78% were admitted to treatment. The negative consequences associated with an ED visit often serve as prime motivators to move patients toward dealing with their substance abuse problems.

It is anticipated that implementation of screening, brief intervention, and referral will result in better health outcomes for patients, and will benefit participating hospitals and communities impacted by these services. Participating hospitals should experience a decrease in hospital ED admissions and hospital admissions caused by use and abuse of alcohol and other drugs and reduced costs associated with those admissions. Communities should be safer, as fewer injury-related events associated with substance abuse are likely to occur. A 1999 study found that within six months of ED brief interventions for alcohol-related problems among older adolescents, there was a 27% reduction in drinking and driving, an 87% reduction in moving violations, and a 58% reduction in alcohol-related injuries.⁴



Missed Opportunities

While EDs provide an excellent venue for intervening in a patient's substance abuse, the visit to the ED is often late in the chain of opportunities for such intervention. Multiple studies have demonstrated the efficacy of brief intervention in a variety of settings, most notably primary care offices and health care clinics.⁵

Often, however, those opportunities are missed. A 2000 survey of primary care physicians and patients published by the National Center on Addiction and Substance Abuse at Columbia University found that 94% of primary care physicians misdiagnose or fail to diagnose substance abuse when presented with early symptoms of alcohol abuse in adult patients. Only 19.2% of physicians felt themselves "very prepared" to diagnose alcoholism, and the percentage was lower for illegal drugs (16.9%). Fewer than a third (32.1%) of primary care physicians screen for substance abuse. Reasons cited for physicians failing to make use of intervention opportunities include: lack of adequate training in medical school or continuing education; lack of knowledge of treatment effectiveness; discomfort discussing substance abuse; time constraints; and patient resistance.6 A 2004 study found that, of the 7% of patients admitted to hospitals who had indications of alcohol disorders, fewer than half were so diagnosed in their hospital records.

United States," Archives of Internal Medicine, 164(7), April 2004.

Future Challenges

DASA will continue to pursue opportunities to expand the WASBIRT model into additional EDs and trauma care centers. At the same time, hospitals, health insurers, and health maintenance organizations would do well to examine the cost offsets associated with providing screening, brief intervention, and treatment services for all individuals who enter EDs. It is likely that the cost of training of physicians and other health care professionals to provide appropriate interventions and referrals would be more than offset by decreased ED and hospital utilization.

There is also a substantial need for improved training of health care providers, both in their initial, residency, and continuing educations, on issues related to substance abuse. County medical associations could play an important role in facilitating the education of health care providers about the impact of brief interventions and the availability of community-based treatment resources.

Perhaps most important are efforts to mitigate the effects of stigma on patients, providers, and health care systems. Once substance abuse prevention and treatment efforts are considered part of larger array of health care services, and regularly provided as appropriate, it is likely that overall health care costs will be significantly reduced, and the health of individuals, families, and communities will be significantly enhanced.

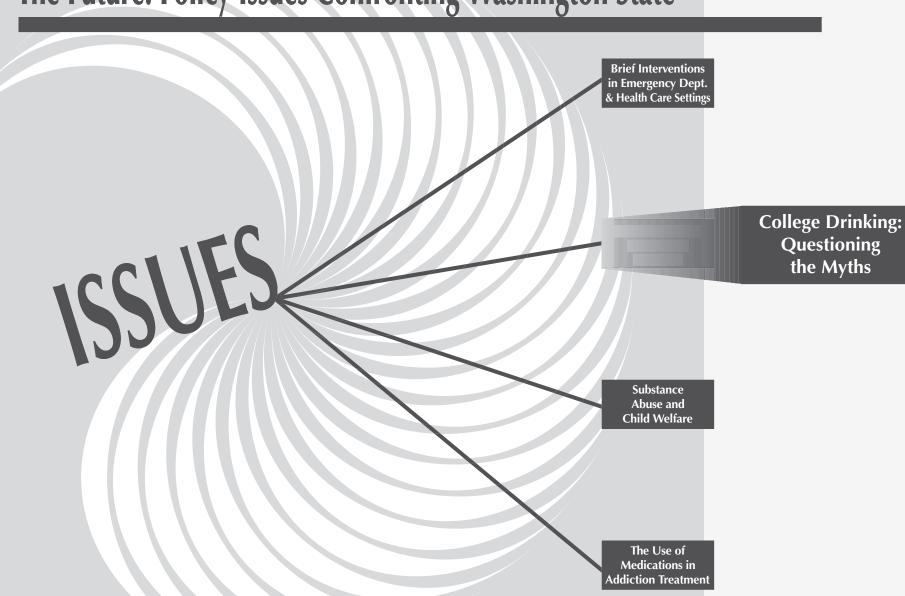
¹ Center for Substance Abuse Treatment. Alcohol and Other Drug Screening of Hospitalized Trauma Patients. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. TIP 16, 1995.

² Alden, J., Wang, N., & Camargo, C. "U.S. Emergency Department Visits for Alcohol-Related Diseases and Injuries Between 1992 and 2000," Archives of Internal Medicine, 164(5), March 2004. ³ Gentilello, L., et al. "Alcohol Interventions in a Trauma Center as a Means of Reducing the Risk of Injury Recurrence," Annals of Surgery 230(4), October 1999.

⁴ Monti, P., et al. "Brief Intervention for Harm Reduction with Alcohol-Positive Older Adolescents in a Hospital Emergency Department," Journal of Consulting and Clinical Psychology 67(6), 1999.

Fleming, M., et. al. "Brief Physician Advice for Problem Alcohol Drinkers," Journal of the American Medical Association Vol. 277, 1997.

⁶ The National Center on Addiction and Substance Abuse at Columbia University. Missed Opportunity: The CASA National Survey of Primary Care Physicians and Patients. New York, NY: 2000.
⁷ Smothers, B., Yahr, H., & Ruhl, C. "Detection of Alcohol Use Disorders in General Hospital Admissions in the





College Drinking: Questioning the Myths

Drinking at colleges and universities is a major issue, taking its toll on youth in deaths, injuries, assaults, sexual abuse, unsafe sex, and academic problems. Students perceive peer alcohol use to be higher than it actually is. This misperception is a leading contributing factor in young people deciding to engage in high-risk drinking. Countering student misperceptions is one strategy shown to be effective among at-risk drinkers.

Consequences related to alcohol use on college and university campuses are a much more serious problem than many people realize. The issue has received much attention over the past few years. Tragic events at Washington State colleges and universities are covered in national media and elicit responses from elected officials and school administrators. Yet, between these isolated events, including student riots, collapsing decks, or fires at parties, there are daily deaths and injuries affecting our young people.

With so much recent attention on this issue, one might think that excessive drinking on campus is a new problem. In fact, campus drinking rates have been studied since the 1950's. The cultural expectation is that when one reaches college, it is not only permissible to drink, even if under 21, but that it is the norm and a rite of passage. Students come to college expecting that they will be drinking and that most of their peers will be drinking as well.

To address this norm, there is a national movement of colleges and universities to deal with the problems of alcohol and other drug abuse on campuses. In our state, the Washington State College Coalition for Substance Abuse Prevention brings together health professionals from campuses to work on this issue.

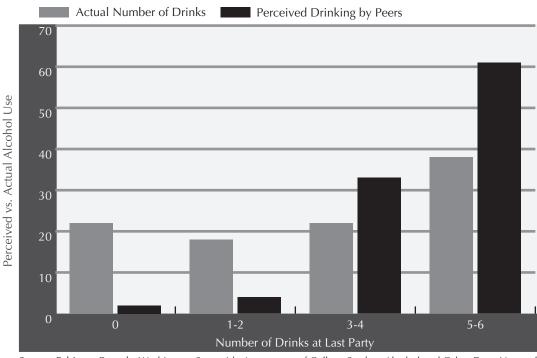
Before launching prevention strategies to address the problem of college drinking, it is necessary to define the patterns of alcohol consumption occurring on campus. Rather than assuming that the national data holds true for students at Washington State colleges and universities, it was necessary to conduct a survey. In 2004, the College Coalition concluded the Washington Statewide Assessment (WASTA). The twofold purpose of the WASTA was to conduct a baseline assessment of (a) individual-level alcohol and other drug use among a sample of Washington State college students, and (b) campus- and community-level prevention practices among a sample of Washington State institutions of higher education, in order to plan and evaluate current and future capacities to implement evidence-based prevention strategies.¹

Results of the WASTA indicate that while levels of alcohol use on campus remain high, more students are reporting no alcohol use or moderate drinking. In fact, a small percentage of students who exhibit problem drinking behavior cause a disproportionate number of negative consequences for themselves and their peers. With the media attention and persistent norm that the college years are a time for heavy drinking, many students in Washington and the nation as a whole are misinformed about the reality of college alcohol use.

The survey conducted as part of WASTA found that students' perceptions of the frequency with which typical students use alcohol in the past 30 days greatly exceeds the actual reported frequencies of use. A pattern of misperception of peer alcohol use norms typifies students' responses on this scale, as indicated by the following:

- 17.8% report never using alcohol, but 0.9% believes that typical students would report that they had never used alcohol.
- 0.3% report using alcohol every day, but 31.8% believe that typical students use alcohol every day.²





Source: Fabiano, P. et al., Washington Statewide Assessment of College Student Alcohol and Other Drug Use and Consequences and Campus - and Community-Based Prevention Practices: 2004.

Students greatly underestimate the number of their peers that abstain or drink in moderation and greatly overestimate the number of their peers that drink heavily. Students in the WASTA sample greatly overestimate the percentage of their peers who engage in frequent, heavy drinking. While less than one percent of students report daily use of alcohol, 31.8% of students believe their peers drink daily. Conversely, while 31.6% have chosen never to use alcohol or have not used in the past 30 days, 0.9% believe their peers would choose not to drink.³

Unfortunately, the persistent myth that excessive drinking is the norm is a leading contributing factor in young people deciding to engage in high-risk drinking. There are well-established relationships between the level of alcohol consumption and increased risks for negative consequences.^{4,5} For those students that do engage in excessive drinking, there is a markedly higher incidence of negative consequences.

Nationally, alcohol use by students results in a staggering level of negative consequences. As reported on CollegeDrinkingPrevention.gov, these consequences affect



not only the drinker, but their peers and the members of the community. The consequences include:

- **Death:** 1,400 college students ages 18-24 die each year from alcohol-related unintentional injuries, including motor vehicle crashes.⁶
- **Injury:** 500,000 students ages 18-24 are unintentionally injured under the influence of alcohol. ⁷
- Assault: More than 600,000 students ages 18-24 are assaulted by another student who has been drinking.
- Sexual Abuse: More than 70,000 students ages 18-24 are victims of alcohol-related sexual assault or date rape.
- Unsafe Sex: 400,000 students ages 18-24 had unprotected sex and more than 100,000 students between the ages of 18 and 24 report having been too intoxicated to know if they consented to having sex. 10
- Academic Problems: About 25% of college students report academic consequences of their drinking including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall. ¹¹ ¹² ¹³ ¹⁴
- Health Problems/Suicide Attempts: More than 150,000 students develop an alcohol-related health problem¹⁵ and between 1.2 1.5% of students indicate that they tried to commit suicide within the past year due to drinking or drug use. ¹⁶
- **Drunk Driving:** 2.1 million students ages 18-24 drove under the influence of alcohol last year. ¹⁷
- Alcohol Abuse and Dependence: 31% of college students met criteria for a diagnosis of alcohol abuse and 6% for a diagnosis of alcohol dependence in the past 12 months, according to questionnaire-based self-reports about their drinking. 18

Addressing Campus Drinking

To assist in applying appropriate methods, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) divides prevention strategies for college students into three tiers.¹⁹

Tier 1. Strategies Effective Among College Students. The strategies in this tier have been shown to be effective among alcohol-dependent drinkers, problem drinkers, and students whose drinking patterns place them at increased risk for developing alcohol problems. Strong evidence supports the effectiveness of the following strategies: 1. Simultaneously addressing alcohol-related attitudes and behaviors (e.g., refuting false beliefs about alcohol's effects while teaching students how to cope with stress without resorting to alcohol); 2. Using survey data to counter students' misperceptions about their fellow students' drinking practices and attitudes toward excessive drinking; and 3. Increasing students' motivation to change their drinking habits, for example by providing nonjudgmental advice and evaluations of the students' progress. Programs that combine these three strategies have proven effective in reducing alcohol consumption. 20

Tier 2. Strategies Effective Among the General Population That Could Be Applied to College Environments. These strategies have proven successful in populations similar to those found on college campuses. Measures include: 1. Increasing enforcement of minimum legal drinking age laws;²¹ 2. Implementing, enforcing, and publicizing other laws to reduce alcohol-impaired driving, such as zero-tolerance laws that reduce the legal blood alcohol concentration for underage drivers to near zero;²² 3. Increasing the prices or taxes on alcoholic beverages;²³ and 4. Instituting policies and training for servers of alcoholic beverages to prevent sales to underage or intoxicated patrons.²⁴ ²⁵



strategies make sense intuitively or show theoretical promise, but more comprehensive evaluation is needed to test their usefulness in reducing the consequences of student drinking. They include more consistent enforcement of campus alcohol regulations and increasing the severity of penalties for violating them; regulating happy hours; enhancing

Tier 3. Promising Strategies That Require Research. These awareness of personal liability for alcohol-related harm to others; establishing alcohol-free dormitories;, restricting or eliminating alcohol-industry sponsorship of student events while promoting alcohol-free student activities; and conducting social norms campaigns to correct exaggerated estimates of the overall level of drinking among the student body.

¹ Fabiano, P., et al. M. Washington Statewide Assessment of College Student Alcohol and Other Drug Use and Consequences and Campus- and Community-Based Prevention Practices; 2004.

⁴ Midanik L., et al. "Risk Functions for Alcohol-Related Problems in a 1988 U.S. National Sample. Addiction 91, 1996.

⁵ Bondy S., et al. "Low-Risk Drinking Guidelines: The Scientific Evidence", Canadian Journal of Public Health 90(4), 1999..

⁶ Hingson, R., et al. Magnitude of Alcohol-Related Mortality and Morbidity Among U.S. College Students Ages 18-24", Journal of Studies on Alcohol 63(2), 2002.

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹¹ Engs, R., et al. "The Drinking Patterns and Problems of a National Sample of College Students, 1994", Journal of Alcohol and Drug Education 41(3), 1996.

¹² Presley C., Meilman, P., and Cashin, J. Alcohol and Drugs on American College Campuses: Use, Consequences, and Perceptions of the Campus Environment, Vol. IV: 1992-1994. Carbondale, IL: Core Institute, Southern Illinois University, 1996a.

¹³ Presley, C., et al. Alcohol and Drugs on American College Campuses: Use, Consequences, and Perceptions of the Campus Environment, Vol. III: 1991-1993. Carbondale, IL: Core Institute, Southern Illinois University, 1996b.

¹⁴ Wechsler, H., et al. "Trends in College Binge Drinking During a Period of Increased Prevention Efforts: Findings from Four Harvard School of Public Health Study Surveys, 1993-2001", Journal of American College Health 50(5), 2002.

¹⁵ Hingson, R. op. cit.

¹⁶ Presley, C. Leichliter, M., and Meilman, P.. Alcohol and Drugs on American College Campuses: A Report to College Presidents: Third in a Series, 1995, 1996, 1997. Carbondale, IL: Core Institute, Southern Illinois University, 1998.

¹⁸ Knight, J., et al., "Alcohol Abuse and Dependence Among U.S. College Students. Journal of Studies on Alcohol 63(3), 2002.

¹⁹ National Institute on Alcohol Abuse and Alcoholism. Alcohol Alert #58. October 2002. http://www.niaaa.nih.gov/publications/aa58.htm

²⁰ Larimer, M., & Cronce, J. "Identification, Prevention, and Treatment: A Review of Individual-Focused Strategies to Reduce Problematic Alcohol Consumption by College Students", Journal of Studies on

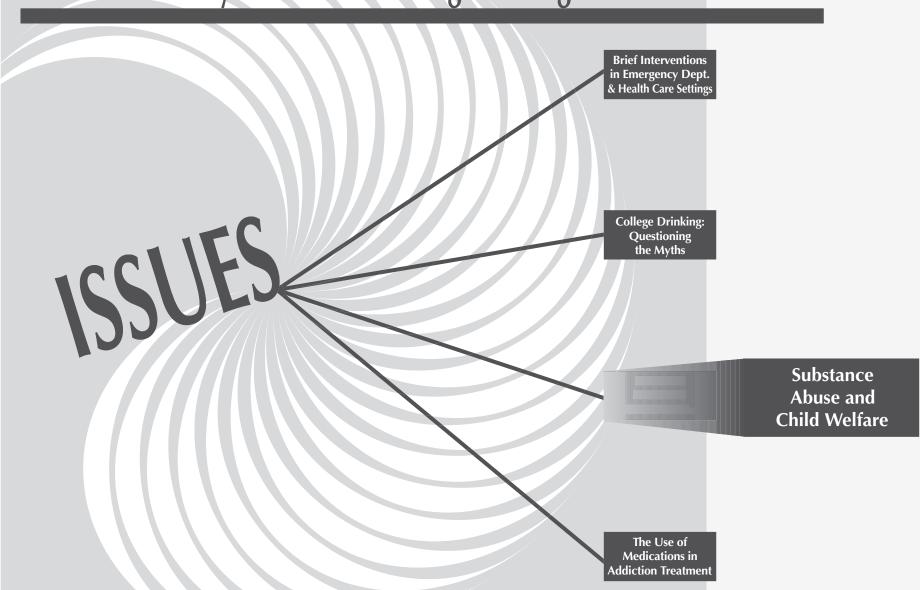
²¹ Wagenaar, A., & Toomey, T., "Effects of Minimum Drinking Age Laws: Review and Analyses of the Literature from 1960 to 2000", Journal of Studies on Alcohol Suppl. 14, 2002.

²² Wagenaar, A., O'Malley, P. and LaFond, L. "Lowered Legal Blood Alcohol Limits for Young Drivers: Effects on Drinking, Driving, and Driving-After-Drinking Behaviors in 30 States", American Journal of Public Health 91(5), 2001.

²³ Cook, P, & Moore, M. "The Economics of Alcohol Abuse and Alcohol-Control Policies", Health Affairs 21(2), 2002.

²⁴ Toomey, T., & Wagenaar, A. "Environmental Policies to Reduce College Drinking: Options and Research Findings", Journal of Studies on Alcohol Suppl. 14, 2002.

²⁵ Holder, H., et al. "A Community Prevention Trial to Reduce Alcohol-Involved Accidental Injury and Death: Overview. Addiction 92(Suppl. 2), 1997.





Recognition of the close links between substance abuse and child abuse and neglect is growing. Yet, access to chemical dependency treatment for parents with children in the child welfare system remains difficult. The Division of Alcohol and Substance Abuse is now working with the Children's Administration to foster greater understanding and improve collaboration between the substance abuse prevention and treatment and child welfare systems.

Child Maltreatment 2003, a report issued by the U. S. Department of Health and Human Services, Administration for Children & Families, Children's Bureau, indicates there were an estimated 906,000 confirmed victims of child abuse or neglect in 2003, a rate of 12.4 per 1,000 children in the national population. Among maltreated children, 61% experienced neglect; 19% were physically abused; and 10% sexually abused. An estimated 1,500 fatalities were attributed to child abuse and neglect.¹ Every day hundreds of thousands of young people suffer the effects of family dysfunction, violence, homelessness, crime, and poverty that result from living in a household impacted by substance abuse. Experts agree there is a strong, frequently occurring correlation between parental chemical dependency and child abuse and neglect.

A 1999 report from the National Center on Addiction and Substance Abuse at Columbia University found that parental substance abuse causes or exacerbates seven out of ten cases of child abuse and neglect, and results in \$20 billion annually in federal, state, and local government spending. Children whose parents abuse drugs or alcohol are three times more likely to be abused and four times more likely to be neglected than are children of parents who are not substance abusers. ²

In Washington State, the federal 2004 Child and Family Services Review found that substance abuse is the primary reason for opening 10% of the child welfare cases reviewed.

Substance Abuse and Child Welfare

Substance abuse was cited in 34% of the cases as the reason for children coming to the attention of the Washington Child Protective Services.³

Two Different Systems

The child protective services system and substance abuse prevention and treatment field operate with different goals, philosophies and mandates. The highest priority of the child welfare system is to provide immediate protection for children, often beginning by removing the child from immediate risk of harm. Secondary goals are to move children into a stable environment as quickly as possible, and then, once the risk in the original home is eliminated, to attempt family reunification. Chemical dependency treatment, in contrast, is directed at assisting clients (the parents) in controlling a chronic disease condition and helping them move through what is often a slow process of recovery.

Furthermore, accessing chemical dependency treatment in a timely manner remains difficult. Nationally, 67% of the parents with children in the child welfare system require chemical dependency treatment, but the child welfare agencies are able to ensure treatment for only 31% of them. Complicating matters still further is the difficulty in getting child welfare workers, already burdened by large caseloads, to document the impact of parental substance abuse on parenting and family functioning, for which they are not fully trained.

The 2004 Child and Family Services Review final report determined that there is a critical gap in service array in Washington State, particularly in the areas of mental health and substance abuse treatment. In addition, while research has shown that consistent exposure to parental abuse of alcohol and other drugs may contribute to the development of a child's own substance abuse problems, there is often a critical lack of targeted developmentally appropriate substance abuse



prevention services for children of chemically dependent parents. In short, there is much work yet to be done.

Future Directions

Staff from both systems should be provided with opportunities to learn about the other system. Training should include content on the interrelatedness of substance abuse and forms of family violence, such as child abuse and neglect. The substance abuse treatment workers need to have a better understanding of the child welfare system and the importance of family dynamics in support of reunification. In addition, child welfare workers need to have a better understanding of addiction and the recovery process. It is also important to increase interagency communication and collaboration between the two systems, working together with the client's best interest in mind. Case conferences should include all of the individuals who are working with the family. This includes sharing information and concerns about the clients.

The costs of parental AOD use are incalculable and the scars of drug-and alcohol-spawned parental abuse and neglect is likely to be permanent. Through increased collaboration, education, and information sharing both the child welfare system and chemical dependency system will be better able to serve the families impacted by AOD.

Recognizing common challenges and opportunities, in January 2005, the Washington State Division of Alcohol and Substance Abuse (DASA) and the Children's Administration (CA) signed an interagency agreement to improve access to and use of chemical dependency treatment services for families, and prevention services for youth. Included in the

agreement are commitments to develop a comprehensive and collaborative training plan to foster greater understanding of alcohol/drug-related issues, earlier identification of substance abuse, and more systematic intervention, including screening and treatment referral.

During the 2005 Legislative Session, Senate Bill 5763 was passed to require the Department of Social and Health Services (DSHS) to provide chemical dependency specialist services at each of the 44 Division of Children and Family Services (DCFS) offices. The purpose is to enhance the timeliness and quality of Child Protective Services (CPS) assessments and to better connect families to needed treatment services. The 20 new chemical dependency specialists' duties may include, but are not limited to, conducting on-site chemical dependency screening and assessment, facilitating progress reports to department social workers, in-service training of DCFS social workers and staff on substance abuse issues, referring clients from DCFS to treatment providers, and providing consultation on specific cases. In addition, DSHS will ensure that each case-carrying social worker is trained in uniform screening for mental health and chemical dependency.

In April 2005, a three-month project in the DCFS office in Yakima County is piloting the use of the UNCOPE, a screening instrument. The six-question tool provides a simple and quick means of identifying whether the person is at risk for abuse or dependence for alcohol and other drugs. If the CPS social worker identifies an individual through the UNCOPE screening as needing further assessment for substance abuse, the client is referred to the chemical dependency specialist located at the CPS office. This pilot project is being collaboratively evaluated by DASA and CA.

¹ Children's Bureau. Children Maltreatment 2003. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, 2005.

² Reid, J., Macchetto, P., and Foster, S. No Safe Haven: Children of Substance-Abusing Parents. New York, NY: National Center on Addiction and Substance Abuse at Columbia University, 1999.

³ Children's Bureau. Child and Family Services Review—Washington State. Washington, DC: U.S. Department of Health and Human Services Administration for Children and Families Administration on Children and Families, Children's Bureau, 2004.

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The Use of Medications in Addiction Treatment



The Use of Medications in Addiction Treatment

Medications can play an important role in the treatment of alcohol and other drug addiction and relapse prevention. Three new medications – naltrexone, acamprosate, and Suboxone – are particularly promising. When indicated, medications for the treatment of alcohol and drug addiction work best used in tandem with psychosocial interventions.

The New Medications

Over the past ten years, several new medications have become available which have demonstrated effectiveness in the treatment of alcohol or drug addiction, and in relapse prevention. There are three of particular importance: naltrexone, in both its short and long acting forms, acamprosate; and Suboxone. In the past, many treatment professionals have resisted the use of medications beyond acute detoxification in the treatment of addictions. This is understandable, given the somewhat checkered history of medications which, though promised to be nonabusable, have ended up significantly abused, such as certain benzodiazepines, and, more recently, opiates for "pain management." However, it would be short-sighted for Washington State addiction treatment personnel to not examine both the cost and benefits of the use of medications on a case-by-case basis. The above three medications have all received Federal Drug Administration approval for the treatment of addictions or relapse prevention, and all have been highly scrutinized.

Naltrexone

Naltrexone or Revia®, is not actually new. It was developed as an opiate receptor blocker many years ago and has been used in treatment programs as an opiate antagonist for persons who have become dependent on opiates, especially with recovering anesthesiologist physicians. Clinical observation in some patients taking naltrexone revealed

that certain patients who also used alcohol seemed to drink less and reported that it affected them less. This resulted in a number or randomized clinical trials in the early 1990's, which in most cases showed that, in specific alcoholdependent populations, patients who took oral naltrexone drank less and for fewer days. A new development around naltrexone has been the production of a long-acting injectable form that can be given monthly. Findings from a recent study indicate that, even in relatively unmotivated alcoholdependent patients, there were significantly fewer days of drinking and, when drinking happened, less was consumed, although rates of complete abstinence were not greater than placebo. This appears to be the emerging clinical profile of naltrexone, which may be best seen more as a "harm reduction" aid rather than a "complete abstinence" treatment enhancer.

Side Effects and Potential Toxicities: The main side effects observed with naltrexone are mild to moderate nausea, and at times, vomiting, especially during the first week or two of use. Some patients also experience mild to moderate dysphoria. Since naltrexone is an opiate receptor blocker, if persons need to take opiates for acute pain relief, the opiates either will be ineffective, or a markedly increased dose of them will need to be given.

Dosage: Naltrexone is usually started at 25mg per day and over the next few weeks moved to either 50, 75, or 100mg per day. It is covered for six months by Medicaid, provided the person is involved in a certified addiction treatment program. DASA has been flexible in approving its use for patients with co-occurring disorders involved at a mental health center. The new, one-a-month injectable form appears especially effective, and should be available clinically soon. The cost of the medication ranges from about \$3-8 per day, depending on dosage.



Acamprosate

Acamprosate (brand name, Campral®), which is made by Forest Pharmaceuticals, was released in the United States in early 2005 with FDA approval for the maintenance of abstinence from alcohol dependence. Acamprosate has been available in a variety of European and other countries for over ten years. Unlike naltrexone which works as a blocker of the opiate receptor, acamprosate appears to work by stabilizing the balance between the inhibitory-GABA system and the excitatory-glutamate/NMDA system. With chronic alcohol dependence, the excitatory system appears to upregulate in order to deal with the chronic onslaught of alcohol on the inhibitory GABA system. It is thought that acamprosate works by stabilizing this system.

Side Effects and Potential Toxicities: Acamprosate interacts with almost no other medications, vital functions, vital signs, or other body systems. It is excreted only in the urine and is not metabolized in the liver. It is thus is safe for patients with significant liver impairments, unlike Antabuse® or naltrexone, which are liver-metabolized. In large studies, the only side effect slightly more common than with placebo was mild diarrhea in the first two weeks of use. It has not been found either safe or toxic in pregnancies, and thus should be stopped if a woman becomes pregnant while taking it. It has no effect on euphoria or mood, and does not cause any kind of tolerance or withdrawal symptoms, whether patients use it alone or along with alcohol. There is at present no demonstrated effectiveness with acamprosate for addictions other than alcohol dependence.

Dosage: Due to the way it is absorbed, acamprosate must be taken as two pills three times a day, with each dosage period separated by at least four hours. It is recommended that patients take the medicine continuously for at least three months, whether they relapse or not, and then use is renegotiated. Unlike the injectable naltrexone, acamprosate

has not been shown effective in patients with less than moderate motivation to be abstinent. The strongest findings from the outcome studies indicate that acamprosate is most effective in increasing complete abstinence from alcohol, or increasing the time before the first drink. The cost of acamprosate is approximately \$120 per month. It is also covered by Medicaid for up to one year if a person is enrolled in a certified chemical dependency treatment program, seeing a licensed addiction provider, or is in a mental health-based co-occurring disorders program.

Suboxone

Suboxone is a combination medication composed of the mixed opiate agonist-antagonist buprenorphine and the antagonist naloxone. Its sole indication is for the treatment of opiate dependence, and it is classified as an opiate substitution medication.

It is hoped that the use of buprenorphine-based Suboxone will allow for a broader array of opiate dependent patients to seek and enroll in some sort of addiction treatment. Studies have shown many opiate addicts refuse the rigor of daily dosing and urine tests at methadone clinics, though certainly, without this degree of contact and rigor of treatment, there would be no hope for many. On the other hand, those with milder opiate dependence, or those who may have been on methadone for some years, may desire a less monitored atmosphere. They may prefer a weekly or even monthly dispersal of Suboxone and attend Narcotics Anonymous or weekly addiction counseling, especially if they are working and have a family. It is also hoped that buprenorphine, with its mixed activity at the opiate receptor, may allow for more patients who may have had longer term opiate dependency to gradually taper their medication and potentially adopt a totally drug free lifestyle. Whether this in fact will turn out to be the case remains to be seen.



Side effects and potential toxicities: For most patients, Suboxone has few if any side effects. Because it tightly attaches to the opiate receptor, if patients need to take opiates for pain relief for acute surgery or other reasons, either it has to be stopped or markedly increased doses of the opiate need to be given. If patients have been on methadone, especially at doses over 30mg per day within the last two weeks, induction onto Suboxone is often problematic because buprenorphine will kick methadone off the opiate receptor, inducing a minor or even a major withdrawal syndrome. Thus, if moving from methadone onto Suboxone, patients should taper down on methadone to the lowest possible dose, then wait for longest period into active withdrawal before being induced using small doses of Suboxone, generally 2-4mg. Most heroin addicts can be easily dosed onto Suboxone by giving them 2-8mg sublingually approximately 15-20 hours after their last heroin use while they are in significant withdrawal. Dosage adjustment up to the usual standard daily doses of 12-24mg (range 2-32mg) sublingually per day should happen over the first few days.

The Suboxone combination of buprenorphine and naloxone is directed at preventing diversion of the medication for illicit intravenous use. Use of Suboxone intravenously would result in immediate and serious withdrawal. When taken sublingually, little of the naloxone is absorbed, while most of the buprenorphine is absorbed. The sublingual dose goes directly into the circulatory system without needing to pass through the liver, and is thus is more effective.

There appears to be a small street market for diverted Suboxone. Anecdotally it is reported that Suboxone may be used by those addicted to heroin to detoxify themselves. Suboxone has also been evaluated as an acute detoxification agent for persons coming into hospitals or detox centers with opiate dependence. Though much of the research evaluation of this aspect of the medication's use remains to be published, early pilot study experience suggests that it can be effectively used this way. The cost of Suboxone is approximately \$4-16 per day, depending on dosage. It is covered by Medicaid for six months, providing the person is enrolled in a certified addiction treatment program.

In Tandem

Pharmacological aids definitely have a place in the treatment of alcohol and other drug addiction. They are not substitutes for psychosocial interventions, and the two work best in tandem. Just as it might be hoped that medical professionals will become more open to using psychosocial and even spiritual interventions in helping patients with chronic medical illness to restore and maintain better health and functioning, it is also to be hoped chemical dependency professional will be supportive of assisting patients to use medications in treatment and prevention as appropriate.

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